


## Non- linear Raman Image Contrast Enhancing Device

*enhanced chemical contrast for medical diagnostics*

Increase signal- to- noise ratio for non- invasive and quantitative chemical microscopy

Annual Sales Forecast for USA * 				Innovation Status		Idea
Sales & Marketing Support Level	Conservative 80% odds of selling	Most Likely 50% odds of selling	Aggressive 20% odds of selling	Development Status	Proprietary Protection Status	Concept Score
Ultra Low	\$0	\$9,100	\$69,000	1 of 5 In Development	2 of 5 Patent Pending	17  29 is Average
Low Support	\$120,000	\$330,000	\$720,000			
Medium Support	\$1.2 M	\$2.4 M	\$4.4 M			
High Support	\$3.1 M	\$6.7 M	\$11.8 M	Remaining Time & Cost to First Sale		
Ultra High	\$5.9 M	\$12.4 M	\$21.7 M	1-2 yrs	\$1M-\$10M	

### Non- linear Raman Image Contrast Enhancing Device - *enhanced chemical contrast for medical diagnostics*

**Final Decision Maker:** *biotech/ pharma companies, medical practitioners, chemical engineers, biological and materials scientists, and forensic laboratories*

Researchers at the National Institute of Standards and Technology (NIST) have developed a unique pulse shaping device that dramatically enhances chemical contrast of broadband non- linear Raman images by removing unwanted background signal while keeping resonant signal of interest. Specifically, the device enhances image contrast of broadband non- linear Raman spectroscopy, such as coherent anti- Stokes Raman scattering (CARS) microscopy.

It is a novel and simple method of suppressing nonresonant background in CARS microscopy to improve senseitivity and signal- to- noise ratio. The device uses a compact pulse shaper to remove nonresonant background, which has been one of the most challenging obstacles against high- contrast and high- sensitivitiy non- linear Raman microscopy.

\$60,000 for 1 unit

**Seeking:** *Purchase, Distribution, Manufacturing/ R&D*

 Email Inventor(s)

 Link to Website With More Info

 Link to YouTube Video

 Inventor(s) Open to Consulting Requests

 Agree to use Fair Contract

 Invention can be exported

\* Consumption sales forecast. Does not include "Random" events or ☐Inventory Fill☐. Forecast is for Year 1 for Large or Year 2 for Small Companies. Forecast should be read as ...☐With Low marketing support there is an 80% odds of achieving sales of at least...

**Listing #:** USA.75.040209.016

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**Report Assumptions and Inventor(s) Commentary**

Inventor(s) Assumptions	"Most Likely" Estimate	Confidence	Inventor(s) Commentary Data Source or Basis for Assumptions
# of Possible Final Decision Makers	9,000	30%	pharmaceutical, chemical and medical device companies
Revenue per First Purchase	\$60,000.00	30%	
% that will Repeat	50%	30%	
Number of Annual Repeats	0.5	20%	
Revenue per Repeat Purchase	\$10,000.00	20%	
Reseller (Trade) Margin	N.A.	N.A.	
Producer Profit (EBITD)	20%	20%	

Innovation Status			
Development Status	1 of 5 In Development		a patent application has been filed
Cost to First Sale (remaining)	\$1M-\$10M	20%	
Time to First Sale (remaining)	1-2 yrs	20%	
Confidence in Concept Claims made in description		30%	the researchers have noted increased sensitivity in chemical contrast of images obtained using novel technology for different chemical species
Proprietary Protection Status	2 of 5 Patent Pending		a provisional patent application has been filed

Concept Score & Diagnostics						
 <b>Merwyn Concept Score</b> With Confidence Bands			Concept Diagnostics	Red	Yellow	Green
			Percentile Group	Bottom 40%	Middle 40%	Top 20%
Pessimistic 80% odds of at Least	Most Likely 50% odds of at Least	Optimistic 20% odds of at Least	Overt Benefit			
			Reason to Believe			
			Dramatic Difference			
13%	17%	24%				

**Inventor Commentary & Alternative Development Scenarios**
**Inventor(s) Sales Goals**

Minimum Goal	N/ A	Current GOAL	N/ A
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Photo can go here

**Inventor(s) Commentary:**

**CURRENT SALES FORECAST**

Sales & Marketing Support Level	Conservative 80% odds of selling	Most Likely 50% odds of selling	Aggressive 20% odds of selling
Ultra Low	\$0	\$9,100	\$69,000
Low Support	\$120,000	\$330,000	\$720,000
Medium Support	\$1.2 M	\$2.4 M	\$4.4 M
High Support	\$3.1 M	\$6.7 M	\$11.8 M
Ultra High	\$5.9 M	\$12.4 M	\$21.7 M

**If MARKETING CONCEPT Improved**

(Increase Concept Score by +20 Points)

Sales & Marketing Support Level	Conservative 80% odds of selling	Most Likely 50% odds of selling	Aggressive 20% odds of selling
Ultra Low	\$0	\$23,000	\$160,000
Low Support	\$320,000	\$780,000	\$1.5 M
Medium Support	\$3.0 M	\$5.6 M	\$9.1 M
High Support	\$8.4 M	\$15.1 M	\$24.3 M
Ultra High	\$15.8 M	\$28.9 M	\$45.9 M

**If PRODUCT/ SERVICE Improved**

(Increase Repeat Rate & Number of Repeats by 30% and Revenue Per Purchase 20%)

Sales & Marketing Support Level	Conservative 80% odds of selling	Most Likely 50% odds of selling	Aggressive 20% odds of selling
Ultra Low	\$0	\$9,600	\$72,000
Low Support	\$130,000	\$350,000	\$750,000
Medium Support	\$1.2 M	\$2.5 M	\$4.6 M
High Support	\$3.4 M	\$7.0 M	\$12.3 M
Ultra High	\$6.3 M	\$13.0 M	\$22.6 M

**If MARKETING CONCEPT and PRODUCT/ SERVICE Improved**

(Increase Concept +20 Points, Repeat Rate & Number of repeats by 30% and Revenue per purchase 20%)

Sales & Marketing Support Level	Conservative 80% odds of selling	Most Likely 50% odds of selling	Aggressive 20% odds of selling
Ultra Low	\$0	\$24,000	\$160,000
Low Support	\$360,000	\$820,000	\$1.6 M
Medium Support	\$3.2 M	\$5.9 M	\$9.5 M
High Support	\$8.9 M	\$16.0 M	\$25.3 M
Ultra High	\$16.7 M	\$30.0 M	\$47.1 M

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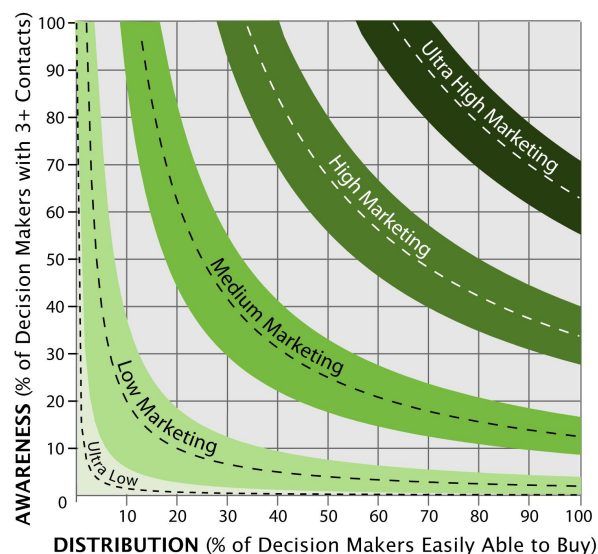
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### Additional Details

Fair Market Royalty (%)				
	Conservative - 80% Odds Royalty Percentage	Most Likely - 50% Odds Royalty Percentage	Aggressive - 20% Odds Royalty Percentage	
At <b>CURRENT</b> State & Status	1.6%	2.2%	2.8%	
Sales & Marketing Support Level	Annual Inventor Royalty Revenue			3 Year Value to Inventor If 50% Odds
	80% Odds	50% Odds	20% Odds	
Ultra Low Support	\$200	\$510	\$980	\$1,500
Low Support	\$3,500	\$7,400	\$12,000	\$22,000
Medium Support	\$25,000	\$51,000	\$82,000	\$150,000
High Support	\$70,000	\$140,000	\$220,000	\$420,000
Ultra High Support	\$130,000	\$260,000	\$410,000	\$780,000

Sales & Marketing Support Level Assumptions				
Sales & Marketing Support Level	Sample Numbers		% Aware x % Distribution (Aware & Able)	Inventor Estimate of Odds
	% Distribution	% Awareness		
Ultra Low Support (Word of Mouth)	5%	3%	0.2%	N/ A
Low Support (Small Company)	20%	10%	2%	N/ A
Medium Support (Medium Sized Company)	50%	25%	13%	N/ A
High Support (Large Company)	75%	45%	34%	N/ A
Ultra High Support (Mega or Niche)	90%	70%	63%	N/ A

**Graph of EQUIVALENT (Awareness x Distribution) Combinations**



NAICS Industry Codes For This Invention
32518 - Other Basic Inorganic Chemical Manufacturing
32519 - Other Basic Organic Chemical Manufacturing
32541 - Pharmaceutical and Medicine Manufacturing

Patent Numbers that apply to this Product/ Service
61/110,686

Inventor(s) PEDIGREE	
Years EXPERIENCE in related industry	20
GRANTED Patents	2
Licensing Deals SIGNED	0
Innovations that have SHIPPED	0

For USA Patents: Utility Patent = 7 digit number, Design Patent starts with D, Planet Patent starts with PP. Provisional Application "61/ xxx,xxx", Non provisional application "12/ xxx,xxx", Design patent application "29/ xxx,xxx"

**CAUTION:** This Merwyn Business Simulation Research Report includes no warranty or guarantee. Results and opinions should be considered rough and directional in nature. This is because the report is based upon inventor- supplied data and simplified modeling methods. If you are looking to invest, distribute, purchase or become involved with this innovation, in any way, we strongly urge you to validate the inventor data and sales forecasts BEFORE committing yourself or your resources. Merwyn Research, Inc. shall not be responsible for any liability or damages arising out of the failure to perform such investigation and validation. Changes in the concept description, product, pricing, or input assumptions will almost certainly change results.

### Additional Forecasts for Other Countries

#### Annual Sales - Probability Forecast - for Canada



Sales & Marketing Support Level	Conservative 80% odds of selling	Most Likely 50% odds of selling	Aggressive 20% odds of selling
Ultra Low	\$0	\$1,000	\$7,600
Low Support	\$14,000	\$36,000	\$80,000
Medium Support	\$130,000	\$270,000	\$480,000
High Support	\$350,000	\$740,000	\$1.3 M
Ultra High	\$650,000	\$1.4 M	\$2.4 M

Assumptions: exchange rate of \$1.00 US = \$1.01083 CAN; population of 33,390,141

#### Annual Sales - Probability Forecast - for United Kingdom



Sales & Marketing Support Level	Conservative 80% odds of selling	Most Likely 50% odds of selling	Aggressive 20% odds of selling
Ultra Low	£0	£910	£6,900
Low Support	£12,000	£33,000	£72,000
Medium Support	£120,000	£240,000	£440,000
High Support	£320,000	£670,000	£1.2 M
Ultra High	£590,000	£1.3 M	£2.2 M

Assumptions: exchange rate of \$1.00 US = £0.50458 UK; population of 60,776,238

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